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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/985,669	11/05/2001	Yoshitaka Hayashi	XA-9573	4070

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EXAMINER

ABDELNOUR, DENNIS J

ART UNIT PAPER NUMBER

3681

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/985,669

Applicant(s)

HAYASHI ET AL.

Examiner

Dennis J. Abdelnour

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-94 is/are pending in the application.
- 4a) Of the above claim(s) 12, 19, 27, 29-40, 48-64 and 75-94 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-18, 20-26, 28, 41-47, 65-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following is a first action on the merits of application serial 09/985,669 filed on November 5, 2001. The following is in response to the election received April 7, 2003.

Election/Restrictions

1. Applicant's election without traverse of the species shown in Figure 1 in Paper No. 7 is acknowledged. Claims 1-11, 13-18, 20-26, 28, 41-47, and 65-74 are readable on the elected species.
2. Claims 12, 19, 27, 29-40, 48-64, and 75-94 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 7.

Claim 12 has been withdrawn because it has been found by the examiner to be drawn to a non-elected species. There is no bearing intervened between the output shaft and the planetary gear as seen in Figure 1 – it appears this claim is drawn to the non-elected species illustrated in Figure 4.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

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Drawings

4. Figure 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-11, 13-18, 20-26, 28, 41-47, and 65-74 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example, claim 7 recites the limitation "said element" in line 3, and claim 9 recites the limitation "the clutch case" in line 2. There is insufficient antecedent basis for these limitations in each claim. These are two examples illustrated how the claims are replete with antecedent problems, and should therefore be corrected.

Regarding claims 6 and 16, the word "becomes" renders the claim indefinite because the language implies a type of transformation. It appears the word "becomes" could just as well be replaced with the phrase "is also", or something similar to that effect.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-11, 13-18, 20, 23-26, 41-47, 65-74 are rejected under 35 U.S.C. 102(b) as being anticipated by Cotterman (USPN 2,266,740).

Cotterman discloses a starter clutch mechanism in Figure 1 comprising a clutch housing 22, main clutch 23, auxiliary clutch 25, one-way clutch 99, and a planetary gear set.

An engine inputs a power through shaft 36 to flywheel 40. Main clutch 23 outputs a torque to a ring gear 101 through clutch actuator mechanism 80/85. Auxiliary clutch 25 outputs a torque to a carrier 66 upon which planet pinions 77 are mounted. One-way clutch 99 locks a reactive force from the sun gear 96 to stationary sleeve 92.

Main clutch 23 and auxiliary clutch 25 are configured as multi-plate clutches. The clutch-operating member is provided with six equally spaced cylinders, each provided with a piston. Three of these pistons are control the main clutch 23, while the other three control the auxiliary clutch 25. Carrier 66 is secured by splines 68 to the output shaft 70 to rotate therewith. The transmission includes an inherent “no-back” feature, wherein no part of the transmission gear may rotate backwardly, which acts as a hill-holder.

The main shaft 70 is rotatable in the end of the crank shaft 36 in a bearing bushing 69. Rotatable hub 85 is provided with a press fitted bearing bushing 88 while a second bearing

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bushing 89 is press fitted over the stationary hub 66. A bearing bushing 95 is press fitted into sleeve 92 to rotatably support the main shaft 70. Near the forward end of the sleeve 92, a sun gear 96 is rotatable on the bearing bushing 98.

The planetary gear in the starter clutch only comes into action when the auxiliary clutch 25 is not fully engaged. In other words, the engagement of the auxiliary clutch 25 facilitates a bypass of the planetary gear arrangement, and a transmission ratio of one to one. The disengagement or partial engagement of the auxiliary gear 25 acts to facilitate different transmission ratios based upon the degree of engagement.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotterman in view of Matsuoka (USPN 5,846,153).

Cotterman has been described above in the 102(b) rejection. Cotterman does not include a damper assembly.

Matsuoka discloses damper assembly 21 in Figure 1. Damper assemblies are well known in the art of power transmissions, used primarily for reducing transmission vibrations.

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It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cotterman to include a damper assembly as taught by Matsuoka in order to reduce driveline vibrations.

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cotterman in view of Teske et al. (USPN 4,637,272).

Cotterman has been described above in the 102(b) rejection. Cotterman does not include a ball-screw actuator.

Teske et al. discloses a ball-screw actuator device, and states in the background of the invention, “ballscrew actuators have been used for achieving relative movement between and positioning of members in many different environments...”. See col. 1, lines 22-24.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cotterman by using a ball-screw actuator as the means to engage the clutch means as taught by Teske in order to more accurately position the piston means.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Friedmann et al. (USPN 6,059,682), Lasoen (USPN 5,507,704), Sakakibara (USPN 4,484,494), and Schjolin (USPN 2,861,482) show similar starter clutch apparatuses utilizing a planetary gear arrangement in conjunction with multiple clutches/brakes, including one-way clutch devices.

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Facsimile Transmission

13. Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 305-3597. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mailroom processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

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(Signature)

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis J. Abdelnour whose telephone number is (703) 305-5309.

The examiner can normally be reached on Monday-Friday, 8:00-5:30, alternate Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703) 308-0830. The fax phone numbers for


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the organization where this application or proceeding is assigned are (703) 305-3597 for regular communications and (703) 305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

dja


May 16, 2003

 5/16/03
Richard M. Lorence
Primary Examiner
AU 3681

